The VA Computerized Patient Record - A First Look

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In support of its in-house DHCP Physician Order Entry/Results Reporting application, the VA is developing the first edition of a Computerized Patient Record. The system will feature a physician-oriented interface with real time, expert system-based order checking, a controlled vocabulary, a longitudinal repository of patient data, HL7 messaging support, a clinical reminder and warning system, and full integration with existing VA applications including lab, pharmacy, A/D/T, radiology, dietetics, surgery, vitals, allergy tracking, discharge summary, problem list, progress notes, consults, and on-line physician order entry.

The Department of Veterans Affairs (VA) is developing its first edition of a Computerized Patient Record (CPR). The VA approach is highlighted by a physician-oriented, graphical user interface to their in-house Decentralized Hospital Computing Program (DHCP) patient care modules. The VA's CPR is being developed around the concept that improved patient care and cost reduction could be achieved by providing a synthesized view of patient data across a variety of information sources and direct, on-line physician Order Entry and Results Reporting (OE/RR) [1].

In addition to gathering, synthesizing, and displaying patient results and treatments, the VA's CPR directly supports physician order entry through editable order sets, user-defined defaults, provider-specific patient lists, and real time, expert system-based order checking.

Emphasis was placed on developing a system which VA physicians would use. The VA CPR provides a graphical environment where physicians can examine results, review problems, observe active medications, and place orders all on the same screen. It also allows them to cut and paste results, treatments, problems, and other data into a progress note, reducing the need to enter the same information repetitively.

VA physicians using the CPR are greeted with a list of patients currently under their care and an accompanying list of clinically relevant alerts. Upon selecting a patient, the automated patient chart opens to the cover sheet. The cover sheet is a one page summary of the patient's current information. It typically includes problems, allergies, active medications, recent laboratory results, next of kin, clinical warnings and notifications, and a summary of past hospital and clinic visits. The user can select any item on the cover sheet for an expanded view of related information.

In the VA CPR, the physician user is in control. From the cover sheet, VA physicians can choose to move through the CPR to fit their needs. Among other things, the user can review and graph lab results over a specific period of time, enter or review a progress note, place and sign orders electronically, or add a problem to the patient's problem list. The system also allows for access to tools such as an on-line clinical calculator. Expansion of the on-line tool list to include literature searches, treatment protocols, drug references, and access to CD-ROM libraries is possible.

Underlying support for the VA's CPR comes in the form of a patient-oriented repository of clinical data, a VA-wide controlled vocabulary termed the "clinical lexicon", and standardized, HL7-content compliant communication between DHCP applications.

The VA CPR will be installed in more than 170 VA medical centers and clinics. Practicing VA clinicians provided functionality and usability guidance throughout the development process.

Reference

[1]. Sittig DF, Stead WW. Computer-based physician order entry: the state of the art. J Am Med Informatics Assoc. 1994;1:108-123.